

U.S. Serial No. 09/931,960
Attorney Docket No. 42390P10675

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (currently amended): An apparatus comprising:

a transceiving circuit of an access point to transmit data to or receive data from one or more subscribers through a wireless transmission medium;

a first data link control (DLC) circuit adapted to transmit data between the transceiving circuit and one or more devices coupled to a first wired communication network;

[[and]]

a second DLC circuit adapted to transmit data between the transceiving circuit and one or more devices coupled to a second wired communication network; and

circuitry to control transmission of a first beacon signal and a second beacon signal in the wireless transmission medium from the transceiving circuit, the first beacon signal comprising information associated with the first wired communication network and the second beacon signal comprising information associated with the second wired communication network.

Claim 2 (original): The apparatus of claim 1, wherein the first and second wired communication networks comprises distinct physical transmission media.

Claim 3 (currently amended): The apparatus of claim 2, wherein the apparatus further comprises a first bridge coupling the first DLC circuit to the first wired communication network and a second bridge coupling the second DLC circuit coupled to the second wired communication network.

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Claim 4 (original): The apparatus of claim 1, wherein the first and second wired communication networks comprise a common physical transmission medium.

Claim 5 (original): The apparatus of claim 1, wherein the first DLC circuit is associated with a first media access control (MAC) address on the first wired communication network and the second DLC circuit is associated with a second MAC address on the second wired communication network.

Claim 6 (original): The apparatus of claim 5, wherein the first DLC circuit is adapted to transmit data between a first class of subscribers and devices coupled to the first wired communication network, and wherein the second DLC circuit is adapted to transmit data between a second class of subscribers and devices coupled to the second wired communication network.

Claim 7 (currently amended): The apparatus of claim 5, wherein the first and second DLC circuits are coupled to the transceiving circuit at a common lower DLC circuit, and wherein the first DLC circuit is coupled to the first wired communication network at a first upper DLC circuit and the second DLC circuit is coupled to the second wired communication network at a second upper DLC [[control]] circuit.

Claim 8 (currently amended): The apparatus of claim 1, the apparatus further comprising ~~circuitry to control transmission of a first beacon signal and a second beacon signal in the wireless transmission medium from the transceiving circuit, the first beacon signal comprising information associated with the first wired communication network and the second beacon signals comprising information associated with the second wired~~

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communication network circuitry to generate a plurality of interleaved target beacon transmission times (TBTTs) based on a timing synchronization function (TSF) and to maintain constant offsets between the plurality of interleaved TBTTs based on the TSF.

Claim 9 (currently amended): The apparatus of claim [(8)] 1, wherein the first beacon signal is associated with a first basic service set and the second beacon signal is associated with a second basic service set.

Claim 10 (currently amended): The apparatus of claim [(8)] 1, wherein the first beacon signal is associated with a first extended service set and the second beacon signal is associated with a second extended service set.

Claim 11 (currently amended): A method comprising:
transmitting data between a transceiver circuit of an access point and subscribers in a wireless transmission medium;
transmitting data between the transceiving circuit and one or more devices coupled to a first wired communication network through a first [(DLC)] data link control (DLC) circuit;
[(and)]
transmitting data between the transceiving circuit and one or more devices coupled to a second wired communication network through a second DLC circuit;
controlling transmission of a first beacon signal and a second beacon signal in the wireless transmission medium from the transceiver circuit, the first beacon signal comprising information associated with the first wired communication network and the second beacon signal comprising information associated with the second wired communication network.

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Claim 12 (original): The method of claim 11, wherein the first and second wired communication networks comprises distinct physical transmission media.

Claim 13 (currently amended): The method of claim 12, wherein the method further comprises:

transmitting data between the first wired communication network and the first DLC circuit through a first bridge; and

transmitting data between the second wired communication network and the second DLC circuit through a second bridge.

Claim 14 (original): The method of claim 11, wherein the first and second wired communication networks comprise a common physical transmission medium.

Claim 15 (original): The method of claim 1, wherein the first DLC circuit is associated with a first media access control (MAC) address on the first wired communication network and the second DLC circuit is associated with a second MAC address on the second wired communication network.

Claim 16 (original): The method of claim 15, wherein the method further comprises:

transmitting data between a first class of wireless subscribers and devices coupled to the first wired communication network through the wireless transmission medium and the first DLC circuit; and

transmitting data between a second class of wireless subscribers and devices coupled to the second wired communication network through the wireless transmission medium and the second DLC circuit.

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Claim 17 (currently amended): The apparatus of claim 5, wherein the first and second DLC circuits are coupled to the transceiving circuit at a common lower DLC circuit, and wherein the first DLC circuit is coupled to the first wired communication network at a first upper DLC circuit and the second DLC circuit is coupled to the second wired communication network at a second upper DLC [[control]] circuit.

Claim 18 (currently amended): The method of claim 11, the method further comprising:

~~transmitting a first beacon signal in the wireless transmission medium from the transceiving circuit, the first beacon signal comprising information associated with the first wired communication network; and~~

~~transmitting a second beacon signal in the wireless transmission medium from the transceiving circuit, the second beacon signals comprising information associated with the second wired communication network~~

generating a plurality of interleaved target beacon transmission times (TBTTs) based on a timing synchronization function (TSF); and

maintaining constant offsets between the plurality of interleaved TBTTs based on the TSF.

Claim 19 (currently amended): The method of claim [[18]] 11, wherein the first beacon signal is associated with a first basic service set and the second beacon signal is associated with a second basic service set.

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Claim 20 (currently amended): The apparatus of claim [[18]] 11, wherein the first beacon signal is associated with a first extended service set and the second beacon signal is associated with a second extended service set.

Claim 21 (currently amended): A system comprising:
a transceiving circuit of an access point to transmit data to or receive data from one or more subscribers through a wireless transmission medium;
~~a first wired communication network comprising one or more devices;~~
~~a second wired communication network comprising one or more devices;~~
~~a first data link control (DLC) circuit adapted a processor to transmit data between the transceiving circuit and one or more devices coupled to [[the]] a first wired communication network [[; and]] .~~
[[a second DLC circuit adapted]] to transmit data between the transceiving circuit and one or more devices coupled to [[the]] a second wired communication network and to control transmission of a first beacon signal and a second beacon signal in the wireless transmission medium from the transceiving circuit,
wherein the first beacon signal comprising information associated with the first wired communication network and the second beacon signal comprising information associated with the second wired communication network.

Claim 22 (original): The system of claim 21, wherein the first and second wired communication networks comprises distinct physical transmission media.

Claim 23 (currently amended): The system of claim 22, wherein the system further comprises a first bridge coupling the first DLC circuit processor to the first wired

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communication network and a second bridge coupling the second DLC circuit processor coupled to the second wired communication network.

Claim 24 (original): The system of claim 21, wherein the first and second wired communication networks comprise a common physical transmission medium.

Claim 25 (currently amended): The system of claim 21, wherein the first DLC circuit is associated with a first media access control (MAC) address on processor is configured to associate the first wired communication network with a first media access control (MAC) address and the second DLC circuit is associated with a second MAC address on to associate the second wired communication network with a second MAC address.

Claim 26 (currently amended): The system of claim 25, wherein the first DLC circuit processor is adapted to transmit data between a first class of subscribers and devices coupled to the first wired communication network [[,] and wherein the second DLC circuit is adapted to transmit data between a second class of subscribers and devices coupled to the second wired communication network.

Claim 27 (canceled).

Claim 28 (currently amended): The system of claim 21, the system further comprising circuitry to control transmission of a first beacon signal and a second beacon signal in the wireless transmission medium from the transceiving circuit, the first beacon signal comprising information associated with the first wired communication network and the second beacon signals comprising information associated with the second wired

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communication network wherein the processor is configured to generate a plurality of interleaved target beacon transmission times (TBTTs) based on a timing synchronization function (TSF) and to maintain constant offsets between the plurality of interleaved TBTTs based on the TSF.

Claim 29 (currently amended): The system of claim [[28]] 21, wherein the first beacon signal is associated with a first basic service set and the second beacon signal is associated with a second basic service set.

Claim 30 (currently amended): The system of claim [[28]] 21, wherein the first beacon signal is associated with a first extended service set and the second beacon signal is associated with a second extended service set.